

AS
cancel

46. (New) An optical polarizer as recited in claim 13, wherein the reflective polarizer comprises a cholesteric liquid crystal material.

47. (New) An optical polarizer as recited in claim 46, further comprising an optical retarder disposed between the reflective polarizer and the dichroic polarizer.

REMARKS

Claims 1 through 43 are pending in this application. Claims 10-12 and claims 15-43 were withdrawn from consideration as being directed to a non-elected invention. By way of the present amendment, these claims have been canceled. Additionally, claims 1, 3, 5 and 13-14 have been amended and new dependant claims 44-47 have been added.

Claims 1-9, 13 and 14 stand rejected under 35 USC § 112, second paragraph as being indefinite. By way of the present amendment, the informalities cited in the office action are believed to be overcome. In particular, claim 1 has been amended to recite that light of the second polarization state is substantially transmitted by the absorbing polarizer. The dependencies of claims 3 and 5 have been amended in accordance with the guidance provided in the Office Action. Claim 14 has been amended to replace the term "dichroic" with "absorbing" which has proper antecedent basis in claim 1. Claim 13, is now independent, rendering the antecedent basis objection moot.

Claims 1-9, 13 and 14 stand rejected under 35 USC §102 (e) as being anticipated by, or in the alternative, under 35 USC § 103 (a) has been obvious over US Patent 5,486,949 ("Schrenk"). This rejection is respectively traversed for the reasons provided below.

Claim 1 is directed to an optical polarizer that includes a polymeric reflective polarizer and an absorbing polarizer disposed in close proximity to the polymeric

reflective polarizer. While Applicants agree that Schrenk teaches a polymeric reflective polarizer, Applicants traverse the assertion of the Office Action that Schrenk's teaching that it may be desirable to incorporate coloring agents, such as dyes into one or more of the individual layers of the birefringent polarizer "inherently and/or obviously serves as an absorbing polarizer." In contrast to this assertion, the absorbing "coloring" agents of Schrenk are pigments or dyes used to selectively absorb certain wavelengths of light. There is no teaching or suggestion of using an absorbing polarizer with the reflective polarizer to substantially transmit one polarization state while substantially absorbing another polarization state. Polarization is neither inherent nor obvious from the colored dyes taught by Schrenk.

In view of the above, it is respectfully submitted that the office actions does not establish that claim 1 is either anticipated by or obvious in view of the Schrenk teaching. Accordingly, reconsideration and withdrawal of the rejections of claim 1 and its dependant claims are respectfully requested.


Independent claim 13, as amended, is also patentable over the teachings of Schrenk for the reason described above. Claim 13 is directed to a class of reflective polarizers that use anisotropic refractive indices to reflect one polarization and transmit a second polarization. A dichroic polarizer is bonded to at least one side of the reflective polarizer so as to provide anti-reflection on that side of the reflective polarizer. Such a polarizer has particular advantages, for example, in direct view LCD displays where, as described in the present specification, the reflective polarizer can be used to increase the display brightness while the viewing side of the reflective polarizer element does not reflect light. The combination of a reflective polarizer of the type recited in claim 13 and a dichroic polarizer is neither taught nor suggested by Schrenk. Such a polarizer may be used to improve the cosmetic appearance of the displays, the extinction ratio of the polarizer, and the optical uniformity of the display. Reduction in iridescence of reflected light may be obtained due to the attenuation of reflected light in the dichroic polarizer as recited in newly submitted claim 44. Newly submitted

dependent claims 45-47 recites specifics constructions of the reflective polarizer as set forth in claim 13. Support for these claims may be found, for example, on page 49, lines 25-31.

In view of the above amendments and remarks, it is respectfully submitted that all pending claims are patentable over the art of record and are in condition for allowance. An early indication of the same is earnestly solicited. Should there remain any issue that could be resolved by way of a supplemental amendment, explanation or examiners amendment, the examiner is respectfully requested to contact the undersigned at the number listed below.

Respectfully submitted,

Registration Number	Telephone Number
37,988	651/733-6649
Date	
July 22, 1999	

Signature

Print Name
William D. Miller

3M Office of Intellectual Property Counsel
P.O. Box 33427
St. Paul, Minnesota 55133-3427